WHAT IS CLAIMED IS:

1. A throttle device for facilitating a reduction in the pressure of a fluid flowing therethrough, the throttle device comprising:

a tubular outer sleeve defining a sleeve axis and having an outer sleeve inner surface and an outer sleeve outer surface, a plurality of outer sleeve circumferential grooves being formed on the outer sleeve inner surface, a plurality of outer sleeve axial grooves being formed on the outer sleeve outer surface and intersecting the outer sleeve circumferential grooves to form outer sleeve orifices extending through the outer sleeve; and

a tubular inner sleeve having an inner sleeve inner surface and an inner sleeve outer surface, the inner sleeve being sized and configured complimentary to and concentrically disposed within the outer sleeve such that a substantial portion of the inner sleeve outer surface contacts a substantial portion of the outer sleeve inner surface, a plurality of inner sleeve circumferential grooves being formed on the inner sleeve inner surface, a plurality of inner sleeve axial grooves being formed on the inner sleeve outer surface and intersecting the inner sleeve circumferential grooves to form inner sleeve orifices extending through the inner sleeve;

wherein the inner and outer sleeve orifices are offset such that fluid flows into the outer sleeve axial grooves, through the outer sleeve orifices, through the outer sleeve circumferential grooves, through the inner sleeve axial grooves, through the inner sleeve orifices, and exits the inner sleeve circumferential grooves to define multiple tortuous flow paths for fluid flowing inwardly through the throttle device.

2. The throttle device of Claim 1 wherein:

each one of the tortuous flow paths defines a cross-sectional area;

the outer sleeve axial and circumferential grooves and the inner sleeve axial and circumferential grooves being configured such that the cross-sectional areas of respective ones of the tortuous flow paths generally increase in an inwardly flowing direction of the fluid.

3. The throttle device of Claim 2 wherein the cross-sectional area of the respective ones of the inner sleeve circumferential grooves is variable along the inner sleeve.

4. The throttle device of Claim 1 wherein each of the inner sleeve circumferential grooves has a cross-

sectional shape that is of generally decreasing size in a radially inward direction.

5. The throttle device of Claim 1 wherein the inner sleeve circumferential grooves each include slanted walls which are configured such that fluid flowing inwardly through the throttle device exits the inner sleeve circumferential grooves in a predetermined direction.

6. The throttle device of Claim 1 further comprising:

a piston body sized and configured to be complimentary to and slidable within the inner sleeve inner surface, the piston body including an end face disposed on an end thereof;

wherein each of the inner sleeve circumferential grooves is configured such that the end face traverses at least two adjacent ones of the inner sleeve circumferential grooves at any position along the inner sleeve.

7. The throttle device of Claim 1 wherein the inner and outer sleeves are cylindrically configured.

8. The throttle device of Claim 1 wherein the inner and outer sleeves are conically configured.

9. The throttle device of Claim 1 further comprising:

at least one tubular intermediate sleeve having an intermediate sleeve inner surface and an intermediate sleeve outer surface, the intermediate sleeve being sized and configured to be complimentary to and concentrically disposed between the inner and outer sleeves such that a substantial portion of the intermediate sleeve outer surface contacts a substantial portion of the outer sleeve inner surface and a substantial portion of the intermediate sleeve inner surface contacts a substantial portion of the inner sleeve outer surface, a plurality of intermediate sleeve circumferential grooves being formed on the intermediate sleeve inner surface, a plurality of intermediate sleeve axial grooves being formed on the intermediate sleeve outer surface and intersecting the intermediate sleeve circumferential grooves to form intermediate sleeve orifices extending through the intermediate sleeve;

wherein the inner, intermediate and outer sleeve orifices are offset such that fluid flowing inwardly through the throttle device defines multiple tortuous flow paths.

10. A throttle device for facilitating a reduction in the pressure of a fluid flowing therethrough, the throttle device comprising:

an outer stage comprising:

a tubular outer sleeve having an outer sleeve inner surface, an outer sleeve outer surface and a plurality of circumferentially-spaced, axially-oriented outer sleeve slots formed through the outer sleeve;

a stack of axially-spaced outer sleeve rings affixed to the outer sleeve inner surface, each of the outer sleeve rings defining an outer sleeve ring inner perimeter; and

the outer sleeve inner surface and the outer sleeve rings collectively forming a plurality of outer sleeve circumferential grooves, a plurality of outer sleeve orifices being formed at the intersection of the outer sleeve rings and the outer sleeve slots; and

an inner stage comprising:

a tubular inner sleeve having an inner sleeve inner surface, an inner sleeve outer surfaces and a plurality of circumferentially-spaced, axially-oriented, inner sleeve slots formed through the inner sleeve; and

a stack of axially-spaced inner sleeve rings affixed to the inner sleeve inner surface, each of the inner sleeve

rings defining an inner sleeve ring inner perimeter;

the inner sleeve inner surface and the inner sleeve rings collectively forming a plurality of inner sleeve circumferential grooves, a plurality of inner sleeve orifices being formed at the intersection of the inner sleeve rings and the inner sleeve slots;

wherein the inner stage is concentrically disposed within the outer stage such that a substantial portion of the inner sleeve outer surface contacts a substantial portion of each one of the outer sleeve ring inner perimeters, the inner and outer sleeve orifices being offset such that fluid flows into the outer sleeve axial slots, through the outer sleeve orifices, through the outer sleeve circumferential grooves, into the inner sleeve axial slots, through the inner sleeve orifices, and through the inner sleeve circumferential grooves to define multiple tortuous flow paths for fluid flowing inwardly through the throttle device.

11. The throttle device of Claim 10 further comprising:

a piston body sized and configured to be complimentary to the inner sleeve ring inner perimeter and slidable within the stack of inner sleeve rings, the piston body including an end face disposed on an end thereof;

wherein the inner sleeve rings have an axially-undulating profile such that the end face traverses at least two adjacent ones of the inner sleeve circumferential grooves at any position along the inner sleeve.

12. The throttle device of Claim 10 wherein:

each one of the inner sleeve rings has a cross-sectional configuration;

each one of the inner sleeve circumferential grooves has a cross-sectional configuration;

wherein the cross-sectional configuration of adjacent ones of the inner sleeve rings is variable such that the cross-sectional configuration of respective ones of the inner sleeve circumferential grooves is variable along the inner sleeve.

13. The throttle device of Claim 12 wherein the inner sleeve rings are configured such that each one of the inner sleeve circumferential grooves has a cross-sectional area that is of generally decreasing size in a radially inward direction.

14. The throttle device of Claim 10 wherein the inner sleeve rings each include annular top and bottom surfaces which are conically configured such that fluid flowing inwardly through the throttle device exits the

inner sleeve circumferential grooves in a predetermined direction.

15. A blow-off device for facilitating a reduction in the pressure of a fluid flowing outwardly therethrough, the blow-off device comprising:

a tubular outer sleeve defining a sleeve axis and having an outer sleeve inner surface and an outer sleeve outer surface, a plurality of outer sleeve circumferential grooves being formed on the outer sleeve inner surface, a plurality of outer sleeve axial grooves being formed on the outer sleeve outer surface and intersecting the outer sleeve circumferential grooves to form outer sleeve orifices extending through the outer sleeve;

a tubular inner sleeve having an inner sleeve inner surface and an inner sleeve outer surface, the inner sleeve being sized and configured to be complimentary to and concentrically disposed within the outer sleeve such that a substantial portion of the inner sleeve outer surface contacts a substantial portion of the outer sleeve inner surface, a plurality of inner sleeve circumferential grooves being formed on the inner sleeve inner surface, a plurality of inner sleeve axial grooves being formed on the inner sleeve outer surface and intersecting the inner sleeve circumferential grooves to form inner sleeve

orifices extending through the inner sleeve; and

an end cap disposed in sealing engagement to the inner and outer sleeves for blocking fluid flowing along the sleeve axis such that fluid flows outwardly through the inner and outer sleeves;

wherein the inner and outer sleeve orifices are axially and circumferentially offset such that fluid flows into the inner sleeve circumferential grooves, through the inner sleeve orifices, through the inner sleeve axial grooves, through the outer sleeve circumferential grooves, through the outer sleeve orifices, and exits the outer sleeve axial grooves to provide multiple tortuous flow paths for fluid flowing outwardly through the blow-off device.

16. The blow-off device of Claim 15 wherein the inner sleeve and outer sleeve are cylindrically configured.

17. The blow-off device of Claim 15 wherein the inner and outer sleeves are conically configured.

18. The blow-off device of Claim 15 wherein the outer sleeve axial grooves are formed within a portion of the outer sleeve outer surface circumference such that

fluid exits the outer sleeve within a predetermined angular range.

19. The blow-off device of Claim 15 wherein the end cap has a planar configuration.

20. The blow-off device of Claim 15 wherein the end cap has a hemispherical shape.